DAYS WITHOUT AN INSTRUCTOR

By H.O.LEWIS

MÖRSE IN SEVEN DAYS WITHOUT AN INSTRUCTOR

Easy Stages to Speed with Graded Exercises

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MORSE IN SEVEN DAYS WITHOUT AN INSTRUCTOR

I HAVE often been struck by the lack of text-books on the subject of the study of morse. There are many books and manuals which, among other things, contain the morse alphabet, but as to teaching the best way to acquire a knowledge of this interesting and nowadays important subject, they are just silent, and keen minds are left to seek and struggle along as best they may in an "uphill manner" with no guide to make the travelling smoother or to indicate the short cuts.

This book will, it is hoped, fill a long felt want and provide just that measure of assistance to the beginner in the initial stages, that he or she, may pass by easy and rapid strides to a really useful turn of speed.

At the outset I will endeavour to answer those questions so many of you have uppermost in your minds. They are the questions I am so often asked.

(1) Is it difficult to learn morse?

(2) What is the best method of learning?

(3) How long does it take to learn?

(1) To the first I would say, that everything that is worth learning presents its own special 'difficulties, morse being no exception to this, although it is definitely not a hard subject to master, unaccompanied as it is by any complicated rules or formulas. Morse is essentially a matter of sound, and the rhythm of sound, and anyone with hearing should have little difficulty in intelligently imitating morse sounds as they do in imitating musical airs and popular songs.

(2) As to the best method of learning I say, and say it with emphasis, that the correct way, and the only way is, to proceed on a "sound" basis, systematically and methodically, and the sole purpose of this book is to guide the reader along the straight and not so difficult way to achieve that goal—the mastery of morse reception and transmission.

But, and I will anticipate your question, morse surely is not all a matter of sound, what about visual signalling, by lamp, heliograph, etc.? Quite right, yet I maintain that to learn morse thoroughly and speedily, it must be done via the ears, and not the eyes. To learn in any other way than by the audible method seems to me like putting the cart before the horse.

Know your morse by sound and you will come to associate letters, numerals, etc., with their sound equivalents, even when using visual means of signalling.

Whenever I press a key, no matter whether it is to actuate a buzzer or a lamp, I think of what I am sending as dahs and dits in rough imitation of the buzzer sound. Even when reading some distant winking lamp, I recognise the flashes not as longs and shorts, but as dahs and dits and automatically translate them into the letters they are intended to represent. This is what I want you to do.

To those of you who will be entering the Forces, to be trained beforehand, even if in only one subject, is to save training time later on, and time is precious these days.

To be prepared ahead of schedule will give you a distinct advantage over an untrained person.

(3) To learn the morse alphabet seven days have been allotted in this book. If you follow the exercises as laid down herein, you will learn it in just that number of days. To acquire a turn of speed, say, 15 words per minute, it is not possible to give a definite period, as so much depends upon the individual and the amount of practice put in, but with ordinary intelligence and studious application, say a half or one hour's practice daily, it should not be long before six words per minute can be sent and read. In approximately one month the keen morse student will be going on to higher speeds, but to attain this desirable end, the daily practice MUST be rigidly continued.

Morse is like learning to ride a bicycle, a little wobbling at first, then that careful ca-canny stage, until finally the complete confidence—sailing along in pleasurable manner. It is a subject that once learnt, I can assure you, will never be forgotten.

You who have decided to learn morse, have done so for many reasons, but having decided—stick to it—do not give it up, because the going may not be exactly down hill all the way.

You who are entering the Forces, owe it to your Country to be efficient, keep that ever fresh in your minds; let nothing deter or daunt you from the course you have set yourself. The consciousness of your ability to keep plodding along will be its own reward.

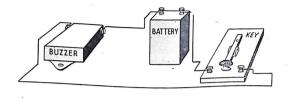
In order that the student may become accustomed to the sound of morse from the commencement, the purchasing of a simple outfit is recommended. It consists of the buzzer itself, a tapping or morse key, and a dry battery to supply the motive power.

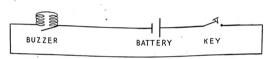
A good buzzer can be bought for approximately 4s., the key for say 9s. (or even less). An ordinary flash lamp dry battery costing between 6d. and 1s. and two feet of insulated bell wire, or twin flex will complete the outfit, the total cost of which should not be much more than 15s. If desired, the buzzer and the battery can be neatly housed in a small box with the key clamped to the outside.

A saving of cost will be effected by purchasing a cheap electric bell, removing the gong, and shortening the striking rod, this will make a reasonably good buzzer although the note will be rather raucous.

Anyone with initiative, a mechanical turn of mind and a few scraps of metal, wood and screws could also manufacture a primitive key; this should suffice, at least for the time being, and would do quite well. After all a key is only a means of making and breaking a circuit. Connect up the parts as shown in the diagram, making sure that the ends of the wire are bared of insulation and cleaned off in order that the metal of the wire makes direct contact with the metal terminals of the buzzer, and key, etc., which should firmly secure the wire in position.

See that there is not too much play between the " make and break" of the key, i.e. the distance through which the





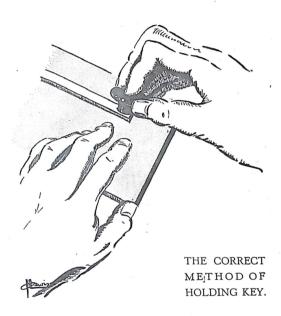
DIAGRAMMATIC SKETCH OF WIRING CONNECTIONS

key moves when being depressed and released. If the distance is too great, you will be prevented from making morse correctly, your wrist will ache, and to attain any speed will be practically impossible. Besides the noise of the metal parts striking will tend to swamp the buzzing of the vibrator and you will become greatly confused by the various sounds.

Adjust the vibrator (buzzer) by the means provided, to as high a pitch as possible; a good buzzer will give quite a musical note.

You are now ready to commence your first lesson in morse.

If you have a friend who is also keen to learn, so much the better as you can help each other. One can send whilst the other writes down that which is being sent. At the end of the exercise you can change over, and whichever one of you was previously sending will now be writing down and vice versa, going through the exercise again from beginning to end. In this way every exercise in this book can be covered, (1) as a receiving exercise and (2) as an exercise in transmission, and each practised many times, in order to obtain the maximum benefit.



LESSON 1.

Before actually proceeding with the morse, it will be as well to explain briefly the handling of the key.

I have seen operators holding or gripping their keys in various ways, and providing always, that accuracy and speed do not suffer, I cannot see that much harm is done. There is, however, like everything else, a correct way of handling a morse-key; and there is no reason why we should not cultivate a correct habit from the commencement, rather than drift into some unorthodox style.

• The way I want you to hold the key allows for its most comfortable manipulation and permits both accurate and speedy transmission.

The tips of the first two fingers of the right hand should rest on the knob of the key with the thumb to the side just underneath the rim of the knob. The key should be held firmly.

The right arm should not be resting anywhere. The hand should be lightly poised as it were, and manipulation of the key is by easy movements dependent upon the flexibility of the wrist.

The base of the key should be held firmly by the left hand.

IMPORTANT. Remember that YOU are MASTER of the key and not the key master of you.

Morse is shown in print as ***** (shorts) and **———— (longs). I want you to think of these signs from now onwards, and always, in sound, as "dits" and "dahs," just as you would pronounce these two words and with the same time value, with just a slight pause on the dah.

The dah dit "sound" system of training, I specially advocate for beginners, and is the system on which my teaching is based. -- must be dit, likewise — must be thought of and sounded as dah.

For example, the first letter of the alphabet, A, represented in morse sign • —, you will call dit dah.

Now let us run through the alphabet saying after each sign, the sound it represents in "dits" and "dahs."

Letter.	Sign.	Sound.
① A	N PON	dit dah
(B		dah dit dit dit
C	1000 H 1000 H	dah dit dah dit
@D	North In III	dah dit dit
(DE		dit
(2F		dit dit dah dit
OF OG	BETTER BESTER M	dah dah dit
BH .		dit dit dit dit
Ø1		dit dit
J	C COTOS COCOS CONS	dit dah dah dah
@K	PRES 1 12943	dah dit dah
WL,	11 PAR 11 H	dit dah dit dit
$\mathfrak{S}_{\mathrm{M}}$	PROFES COMMA	dah dah
N	man n	dah dit
60	STACK EXCEL SCOTS	dah dah dah
(B)	0 1000 1000 W	dit dah da
	terms to seem more	dah dah dit dah
Œ.	n man n	dit dah dit
(I)S		dit dit dit
(3) T	Dental Control	dah
(OU	n n een	dit dit dah
@V	H H U C200	dit dit dit dah
COM	to term more	dit dah dah
(14)	total is in home	dah dit dit dah
Y	erm n mas kan	dah dit dah dah
(2) Z	COMM COMM 0 0	dah dah dit dit
_		

As you say or think of the sound, visualize at the same time the letter it represents, in other words associate the sound with the letter not the sign.

Study the alphabet well, note any peculiarities and similarities, remembering all the time to represent the sound of each character by dits and dahs, or to think of them such.

You will observe that A (- -) dit dah is opposite to N (- -) dah dit. Some letters are without dits and vou will note that a few are without dahs; these are the letters which most frequently occur in the English language.

Now before putting away your first lesson, take the A (dit dah) and Z (dah dah dit dit)—the first and last letters of our alphabet and learn them between now and to-morrow,

repeating them over and over again to yourself at convenient times wherever you are during the day, so that when you return to your second lesson you will have only 24 letters to learn. Just concentrate on these two letters to the exclusion of all others, don't worry about any letters excepting Λ and Z.

LESSON 2.

The letters A and Z have now been thoroughly learnt and we have disposed of the head and tail of the alphabet as it were. To make doubly certain of them they should now be tapped out on your morse outfit which you will have handy with the battery and everything connected up. Remember how I told you to handle your key—first two fingers on the knob with thumb underneath the left hand gripping the base. Now press and immediately release the key as if you were stamping a pencil dot on a piece of paper, and bringing the pencil up sharply again. Keep on doing this in rapid succession and your buzzer will be sounding a series of "dits." Now similarly make several "dahs" by keeping the key pressed just a wee fraction longer. Actually the length of a "dah" is equivalent to three "dits" and the space between two letters is also equal to three "dits."

Now let us go through those two letters A and Z (dit dah and dah dah dit dit) with a slight pause between the two letters equivalent, as I have just told you, to the time it would take to send three "dits."

Tap them out on your key at the same time closing your eyes, for by so doing you will be better able to concentrate on the sound rhythm of these two letters.

Having devoted a few minutes to this we can now venture a step further.

When looking over the alphabet, as I instructed, you noticed amongst other letters—some, which are composed entirely of one or more "dahs."

They are T M O

T (-) dah

M(--) dah dah

O (- - -) dah dah dah.

Look at them and study them well, at the same time repeating them on your morse buzzer in the foregoing order.

Having gone over them many times, mix the order, just as it occurs to you, over and over again. That completed you should now repeat them in the following sequence:—

(Note:—Letters, should be written down in capitals, or

"block letters" as they are otherwise known).

(Repeat several times.)

Before concluding the lesson, we must make quite sure of all the signs that we have learnt so far. i.e., $\Delta \, Z \, T \, M \, O$

So on your key send as follows:-

 T M A O T
 M M Z O M
 T A A Z A

 T M O M T
 A T A Z A
 M A Z O T

 M A M M A
 Z Z A M O
 A T Z M A

 T A O Z M
 O T A T M
 Z A O T Z

(Repeat several times.)

You have now learnt five letters of the alphabet—there are only 21 left. Before finally putting away the lesson, I want you to look up in the morse alphabet, given in Lesson 1, the signs for letters E I S and H, and between this and the next lesson, to concentrate solely on these four new letters E I S and H until you are thoroughly familiar with them.

LESSON 3.

The letters TMO we found we made up entirely of "dahs," and the letters EIS and H which we have been endeavouring to memorise, for this lesson, are composed entirely of "dits."

E (=) dit . I (= =) dit dit

S (- - -) dit dit dit H (- - - -) dit dit dit dit

We will now practice mixing the order so that they will be firmly fixed in our minds.

Get ready with the key then and tap out,

ISEHE ESSII IHHSE EHISE IISSH HSSHI EIHES HIEII SESEH IHSEH SHEIS EEISH

(Repeat several times).

Having gone over these letters several times we must not lose touch with the others that have been learnt. A Z T M O so let us mix them with E I S H as follows:—

I	SEHE	SSAII	IHZES
H	SIEE	AISSH	AAHSZ
Ι	EZHZ	AEZAH	·ASHEM
I	HAHS	ETHIE	ASSZO
M	ASEO	IAEIO	TSHEI
Ι	MASĖ	ZTMEI	SHHSA
E	ZOAT	EISHZ	MESTH

(Repeat several times).

It may prove interesting if we know that from the few characters we have learnt so far, it is already possible to tap out an intelligible simple sentence or two.

Here then are a few such sentences.

Remember the space between two letters is equivalent to three dits but the space between two words is slightly longer, the pause being equal to the time it would take to send five dits.

TOMS HOME IS A HOME
IS TOM AT HIS HOME
IT IS TOMS HOME
IT IS TOMS HOME
THE HOME IS TOMS
TOMS HOME IS A HOME TO TOM
HAS TOM A HOME
TOMS HOME TO ME IS A HOME
HAS TOM A TOMATO
HE HAS TOMATOES AT HIS HOME
THESE TOMATOES SEEM TO ME TOOTHSOME
THAT IS A HAZE
HIS HASTE TO MEET ME.

Nine letters have now been mastered, leaving only 17 more to be tackled and disposed of in similar manner, just like the little nigger boys in fact.

Some more letters have to be selected for us to think over between lessons.

All the vowels have been learnt with the exception of U (• • • —) dit dit dah. This then will be one of our letters and for another we will take the letter immediately following it in the alphabet V (• • • —) dit dit dit dah. Note that

U has two dits preceding (---) and V being one place further on in the alphabet has an extra dit (----); they will be easy to remember that way—anyhow we all know the Victory V (----).

As we proceed to become better acquainted with morse we feel better able to manage to digest so to speak, more letters at a time, so in order to complete our selection of letters for preparation, we will also take the opposites of U and V which are D and B like this:—

These then are the letters to be learnt and to have ready for next time.

LESSON 4.

Those last four letters UDVB have not proved so very difficult to memorize, but we have yet to try them on the buzzer. Let us then repeat them in the order given below—from beginning to end, and again this time in the reverse direction, i.e., from end to beginning, then from right to left, and finally from left to right until there is no possible doubt as to their being perfectly understood.

UVUVV	UVVVU
DBBDD	DBDBB S B DBDB
UVDUB	VDBVD UUBUD
VUDBU	VUBUD BBVVU

(Repeat several times).

Let us now mix them with all the other letters learnt and continue our practice as follows:—

UBVAH	IZAEI	OUSHE
AIHED	USEDU	ESHEB
EAIVZ	THDVA	BTSME
VAUVA	UVZVA	UDBBI
SHODE	MTVHU	BEDSZ
	/D	apost correct time

(Repeat several times):

It is surprising the number of words that can be made out of these letters. You will find much interest by adding to the list given here which should be practiced in similar manner by repeating over and over again.

HUES	DUES	MOOS	SHOES
MUSES	BOOS .	HISSES	MISSES
VISAS	DOVES	DOES	MASSES
DAVIES	DAMES	BOOMS	VIDE
HAZE	MAST	AMAZES	DIVIDES
SIEVES	AMAZED	BEAST	TEASE

(Repeat several times.)

Now close your eyes as I told you in Lesson 2, and tap out all the letters you have learnt to date, just as they occur to you, keep it up as long as you are able, stop only when your wrist begins to ache, 13 letters (i.e. half the alphabet) have now been learnt, the remainder will be just as easy to grasp providing you continue to practice the exercises conscientously.

For our next lesson we are going to take four letters

opposites { F (• • • •) dit dit dah dit L (• • •) dit dah dit dit

opposites K = - dah dit dah R = - dit dah dit

These then are your chosen letters, have them ready for Lesson 5.

Whenever you see these letters in print, on the hoardings, trains, buses, etc. Think of them only in terms of dits and dahs.

LESSON 5.

For this lesson we will commence by sending those four opposites we have been learning F L and R K.

FLRK FLKR LFKR LFRK KRFL FLRK FLKR LFRK LRFK KFLR FKLR LRFK KLFR RLKF KFRL RLKF RRFF LLFR FFKK RKRK (Repeat several times).

We are now familiar with 17 letters.
i.e. AZ TMO FISH UVDB FLKR

Continue :-

ATMZO EUVSH DBLFZ RKFLK RUVVU ABDDB ZOTTO EISHE HEHSM TZALF RLKFE ZATMR

ZALF RLKFE ZATMR
(Repeat several times).

In order to add some zest to the lesson let us see if we can make up sentences from these letters. Here are a few to go on with.

A FEZ IS SOMETIMES RED
ROSES ARE RED
MAKE HIM BAKE IT HARD
I LIKE THE SMELL, OF ROSES
HE SAID TO TOM DO THAT
AS BEST SUITS HIM
DO GOOD FOR THAT BEATS EVIL
SUE LISTENS TO TOM
TAKE A MORSE MESSAGE THAT I
HAVE FOR SUE

Extra practice may be obtained by thinking out a few more sentences and adding to the foregoing.

The letters which we will prepare for our next practice are taken from four more "opposites," they are fairly simple and should not prove too difficult.

Here they are to be studied in odd moments just in the same kind of way as we have learnt the other letters.

it Never

Ample opportunity will be provided for their practice in on next lesson, in the meantime, we must concentrate on learning them and them only; we need not bother our heads about any other letters until we return to the book again.

LESSON 6.

We concluded our last lesson by selecting four opposites, the sound rhythm of which we are now fairly familiar with, but in order to imprint them indelibly on our minds we must have some key and buzzer practice with them as follows:—

PX XP XP XY

PX

				WW			
				WX			
				GP			
P G	XW	PP	WW	GG	XX	PX	
PX	G P	WG	GX	P W	xw	P G	
Repea	t sever	al time	s; we	cannot	have	too m	ach

Practice. Continue using all the letters we now know.

ABVVP FFOUW WGZSP

FFOUW VWXIO FZBDB KGRAZ FSEZW GPHFR BVPUK AZTMO IEISH UVDBP WGZAV UXPGW LFRTL FWGOK FRMTH IEMSE ZESAV UWGLF BPKRO

(Repeat several times).

21 letters have now been introduced, leaving just five to complete the alphabet.

i.e. CJNQY

JNQY

C (---) dah dit dah dit

J (---) dit dah dah dah

N (--) dah dit (opposite to letter A)

Q (---) dah dit dah dit dah (Y reversed).

Y (---) dah dit dah dah (Q reversed).

Thoroughly familiarise yourself with them and have them ready for practising in our next lesson.

LESSON 7.

If all the lessons have been digested and practised strictly, in accordance with the instructions, we shall now be rounding off the alphabet within the time we allotted ourselves, i.e. seven days.

Before running through the complete alphabet let us confirm that we thoroughly know those last five letters

CJNQY.

CINQY
YQNJC
CNJQY
CNJQY
QIYNC
YJNQC
YJNQC
(Repeat several times).

Now tap out the whole alphabet.

ABCDEFGHIJKLM NOPQRSTUVWXYZ. Repeat in reverse direction.

Mixing can best be done, in what are known as groups. Such code groups are usually composed of five letters. In

this form code messages are transmitted by wireless. You will often have heard these messages being sent at varying pitches and varied speeds and wished so much that you were able to read them. Well now that you have equipped yourself with the knowledge of morse, you have also provided yourself with a key so to speak. A key that enables one to enter a world in which distance loses its meaning. A world where sound is whisked over great stretches via the Æther at the speed of light, i.e. 186,000 miles per second.

If any of my readers become wireless operators they will understand better what I mean.

Whenever I listen out during the long watches of the night, with headphones pressing tightly on my ears, my fancy carries me to a different world. A faint message comes through as some lone operator, many thousands of miles away perhaps, taps out morse signals, then suddenly interrupting, comes the crackle and jar of raucous atmospherics breaking in from some mysterious source beyond. I feel like an intruder into the unknown, an eavesdropper of space; yet I am linked up with comrades, that small band of unseen guardians of the Æther dotted all over the globe, who, whilst in communication with each other, are keeping watch like sentinels-Earth Sentinels listening to those whisperings and splutterings, those mysterious eruptions of space, a space peopled by the stars and who knows some other inhabited world or worlds perhaps, whose sentinels also are watching and waiting.

Good opportunity for practice is provided by wireless messages picked up on your own radio set and a test of one's ability to read morse quickly, is made possible by those messages which are being sent at high speed. I strongly recommend such practice as being most useful.

Code Groups.

Repeat several tin	nes.	
·ABCNZ	FGWLP	JAHPX
AZTFL	QRKSL	PAGNR
CAUDB	UWGVA	ATSHM
BDUVA	ZANDB	RKFLY
PJGWF	BFQYW	XYZAB

The alphabet has been mastered, but we have yet to learn numerals and special signs. The figures are quite easy to pick up, the special signs, however, need slightly more attention

(Additional lesson on Numerals, Special Signs and Punctuation).

	Num	erals.
1 2 3 4 5		 Increasing dits denote figures one to five.
7 8 9 0		Decreasing dits denote figures six to nought.

Observe that the figures up to figure 5 are composed of ONE dit, etc., for figure 1, TWO dits, for figure 2 and so

on, until figure 5, which is made up of FIVE dits.

From figure 6 onwards to figure 0 it is all "down hill" as it were. The dahs now precede the dits: Remember then, when numerals are being sent, a dit coming first is a cue that the figure is any numeral up to five. And a dah first, means that the figure cannot possibly be either 1 2 3 4 or 5 (i.e. 5 or any figure before it).

Up to and including figure 5 then, count your dits and

they will indicate the figure.

Figure 6 has the dah first and most dits after it and as the figures increase the dahs likewise increase and the dits correspondingly decrease, until finally figure 0 is represented entirely by dahs.

	Numerals.	
Exercise	on Increasing	Dits.
1 2 3 4 5	3 4	1 2 5
5 4 3 2 1	2 3	2 1 4
2 1 3 5 4	5.5	4 3 3
4 3 5 1 2	2 1	2 3 4
	5 1	5 5 4
5 2 1 3 4 2 3 1 2 4		5 5 4

MORSE IN SEVEN DAYS

MORDII III DII II	TI DILLO
5 1 5 4 4 5 2 3 3 2	3 4 2 5 1 1 2 5 5 3 (Repeat several times).
Numerals Exercise on Decrea	
6 7 8 9 0 0 7 8 6 9 8 8 9 6 7 0 9 6 0 0 9 8 7 6 7 6 6 8 9 7 8 9 6 8 8 9 0 9 0 6	8 9 7 6 0 0 8 7 9 9 9 8 0 0 6 6 7 7 9 9 9 6 6 7 6 0 7 6 6 0 6 7 9 9 0 8 7 6 8 8
	(Repeat several times)
All Numerals 1	l to 0.
1 2 3 4 5 6 7 8 9 0 0 6 5 4 7 7 6 5 3 3 2 1 7 6 5 6 5 4 3 2 9 5 6 0 1 9 7 6 5 4	5 4 2 9 0 6 3 2 5 5 9 1 9 8 2 4 5 3 5 6 4 6 1 9 5, 7 3 8 2 1 9 1 0 5 2 8 2 6 4 5 (Repeat several times)
Alphabet	. T -44 - 1 \
(Including Foreign	N — -
B	P

iì

. H . . .

	T .			u	'					
	1 ••				v ·	• • •	_			
	J				w ·					
	K			-	х -		_			
	L				Y -			-		
	M				Z =					
	F	unct	uatio	on Si	éns					
		34	The	bar a	bov	e the	e let	ters	de	notes
	Full stop AAA		that	they	are	ma	de :	as o	ne	sign,
			ρσ	(dit	lah	dit	dah	dit	da	h).
	comma iii		c.s.	(410						
,		:								
	note of interrogat		m1							
	"inverted commas		ĮI	Before	an	d at	ter	tne	- 11	vorus
()	parenthesis	KK	5		. (conce	erne	a.		
,	apostrophe	WG	٦	Not	e:-	-Lett	ers	reve	rse	d.
!	exclamation	GW	}	2100						
1	oblique stroke	XE	3							
′_	fraction	EX	- [. ,	,		,,		
	separative sign		٢				•			
	semi colon		J							
,		CN								
:	colon	OS -		. •						
-	hyphen	$\overline{\mathtt{DU}}$								
	underline or	$\overline{\mathtt{UK}}$					٠.			
	block letters									
	Decimal Point	FI								•

The foreign signs are of course met with, and to be a "fully fledged" wireless operator, it is necessary that they should be known. They can, however, be picked up in a more or less leisurely manner, say one or two per day.

It is necessary of course to get acquainted with the punctuation symbols as soon as possible.

In the graded exercises, provision is made for their ample practice.

It is recommended that the graded exercises be carried out in conjunction with a time-piece which has a second hand in order to ascertain and measure progress.

The purpose of this book being merely to teach morse, no reference has been made to W/T. (Wireless Telegraphy)

procedure, i.e., the method of handling, and the rules governing, the actual transmission of wireless messages in morse.

The Navy, Army and Air Force, each have their own special methods, although there are many points of similarity between them all.

The procedure used in the Merchant Service is known as "Commercial Procedure."

It is useless to attempt any procedure until some speed in morse reception and transmission is gained. The tuition given in these few pages will, it is hoped, be of such benefit to the diligent student, as to assist him or her to obtain the necessary turn of speed in the shortest possible time.

One final point. If at any time whilst reading morse you should be stuck over a letter, do not pause to ponder, but just carry on reading. It is far better to miss a single letter here and there, than to miss a whole series. One can easily imagine that to hesitate in a message being sent at high speed, is to court disaster.

In morse reception it can be truly said, "He who hesitates is lost."

Remember then not to bother over a missing letter, it may be possible to retrieve it later. This especially applies to P/L (plain language) where, when reading the passage through afterwards, the sense will most likely indicate how to fill in the blanks.

GRADED EXERCISES. EXERCISE No. 1.

CODE.

ANUVA	NAUVN	BVUVA
ANBVU	DUUVB	UDVBA
ETTEA	ISTTE	·SISTE
OETAN	HOTED	MOBED
VISES	MABVT	TBCAN
BCAZD	ZDUVB	DZATO
AMUIS.	VVABD	AUVBD
	(Ret	peat several times).

MORSE IN SEVEN DAYS

1 2 3 4 5	5 4 3 2 1	4 5 3 1 2
3 2 1 5 4	5 5 1 1 3	3 2 1 1 4
3 2 2 1 4	5 5 3 3 2	1 1 2 2 4
5 4 3 2 1	1 3 5 6 1	15457
18234	19245	0 1 2 5 9
15607	8 9 1 5 6	9 0 1 2 3
5 6 5.4 8	69120	2 9 3 4 6

(Repeat several times).

What is the sign for Full stop?

EXERCISE No. 2.

CODE.

ABFGO OJBJA SYTXN	A O A N K N U W V N· Z Y K O L	BATSB BOMEL TRHBE	AXKPY ATRGW OWLQR 12 Groups.
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Numerals.

15896	20987	3 6 4 2 1
9.0 6 0 4	2 1 8 7 6	4 5 6 5 3
46486	981.20	3 4 6 5 7
18060	39761	2 4 6 4 4

Sent in 3 minutes = Rate of 6 W.P.M.

Plain Language or P/L.

THE TIME WILL COME WHEN EVERYBODY WILL HAVE SOME FORM OF RECEIVING INSTALLATION.

Sent in 2 minutes = Rate of 6 W.P.M.

Mixed Groups.

Mixed groups are generally sent in groups containing two letters and two figures.

Note that to distinguish the numeral 0 from the letter O, the figure symbol has a bar written through, thus, θ , and to distinguish the letter i from the numeral 1 the letter is dotted

Example		N	umera	1
	A	S	θ	Z
	3	Y	N	O —(letter)
	\mathbf{F}	4	5	i —(letter)
(numeral)	1	2	\mathbf{B}	. C '

EXERCISE No. 3.

CODE.

CANOP	QLWOT	TLOKR
ZVBZS	NXAKV	VWUNO
STBAY	KNAON	DJBXT
YQAQP	YZLAL	EBHCN
Sent in 2	minutes = Rate of	6 W.P.M.

P/L.

We left Southampton docks in the afternoon, it was a

miserable day with an overcast sky. A high wind was

blowing accompanied by dismal rain.

(AAA)

Sent in 4 minutes = Rate 6 W.P.M.

Note that the comma and full stop each count as a separate word.

Numerals.	Mixed Groups.
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Q X 8 1 i U V 4 8 9 B O 5 H M 6
2 1 8 9 7 3 6 4 2 1	θ S 2 F θ 7 9 G
78779 02186	A 3 Z 5 6 θ 1 C
Sent in 2 minutes = Rate	C Y 2 3 M 7 4 6
. 6 W.P.M.	Sent in 2 minutes = Rate
	6 W.P.M.

EXERCISE No. 4.

CODE.

YMOHA	AGNRN	AXBQB
FOULC	$P \times R \times P$	AESKR
ROIXK	LAMEZ	TRFJX
ABJUX	OVAWO	OLGNS
Sent in	2 minutes - Rate	6 WPM

P/L.

Only a few relatives and friends lined the quay-side to $\overline{\overline{DU}}$

wave farewell.

ΑΑΑ

. The great ocean liner gradually glided from her berth out into the murkiness.

AAA

Sent in 4 minutes = Rate 6 W.P.M.

Numerals.		Mixed Groups.	
9 8 7 1 6 2 0 4 8 5 3 2 4 6	7 6 1 9 8 3 5 3 7 4 6 3	9 5 B C A 6 Z 4 4 V 3 U A θ O 9 1 i O θ	7 Z 6 2 5 P L 7 A X 9 8 Y Z 2 1 G 8 7 W
0		d	minutes -

Sent in 2 minutes = Rate 6 W.P.M.

Sent in 2 minutes = Rate 6 W.P.M.

What is the sign for Inverted Comma?

" " " Parenthesis?

EXERCISE No. 5.

CODE.

RLANE	XINEY	WAWVB
AGNPC	ROYAF	NAGYR
LACBL	CFBUQ	FOQYS
BUAIT	APOJŨ	PEHJW
SINEV	RGWYY	

Sent in 2 minutes = Rate 7 W.P.M.

P/L.

Many smiling faces peeped over the sides from high above.

\overline{AAA}

The small group of people left behind looked so forlorn as they held aloft their fluttering handkerchiefs whilst the "Melita" receded from view.

(AF) (AF)

(Sent in 5 minutes = Rate 7 W.P.M.)

MORSE IN SEVEN DAYS

1 Pair

Note that one pair of inverted commas " " count as one word.

Numerals.

Mixed Groups.

36421 98120 A 2 9 0 B 7 5 i 15647 51k4 18596 90604 46486 Z 1 2 Y NW24 06PO 20987 21876 45653 N 8 5 A 12 W G LFSS 34657 18060 39761 Y Q 2 3 OF 09 B 4 C 7 32198

24644 39755 3219 Sent in 3 minutes=Rate 7 W.P.M.

Sent in 2 minutes = Rate 7 W.P.M

EXERCISE No. 6.

CODE.

AGQRR SAFKX GNFXG LPAYP GUAZA RABOE LYONZ ASTRO TRFWZ HOSEX MOORA GNALU PIAOW NAIPO RHSEA NGABC

Sent in 2 minutes = Rate 8 W.P.M.

P/L.

(AF)

(AF)

We were sailing to the "Golden West," the land of

opportunities, the land of our dreams. Our hopes were high

the eagerly awaited day had arrived.

AAA

What had the future in store for us.

AAA

Sent in 4 minutes = Rate 8 W.P.M.

	Numeral	s.	Mixed G	roups.
20987 90604 46486 18060 Sent in 21	1 5 8 9 6 2 1 8 7 6 9 8 1 2 0 3 9 7 6 1 ninutes=8 V	3 6 4 2 1 4 5 6 5 3 3 4 6 5 7 2 4 6 4 4 V.P.M.	A S 2 Z θ 9 L K 2 2 2 i P X 1 4 6 3 A V N 5 5 θ	B R 9 8 P 8 P 1 K K S S O 0 5 G V A 3 6 1 i 2 S
			G 8 9 Y	5 6 A C

Sent in 2 minutes=Rate 8 W.P.M.

EXERCISE No. 7.

CODE.

ALNXP	BYCAO	FIPYR
AWVOS	GNAFN	BROLA
RSAEX	AKRIF	TRESH
HAFGO	WVAGI	YQUNE
BCGIS	ARLZA	TŽXWN
HLKAP		OWYXZ
	ANJLY	
. Sent in	2 minutes = Rate 9	W.F.M.

P.L.

The voyage turned out to be for the most part uneventful.

AAA

It is true there were deck games and other amusements and as a special diversion a ships concert, but one soon wearied

iii

of these, other things occupied our thoughts.

iii AAA

Sent in 4 minutes = Rate 9 W.P.M.

Numerals. Mixed Groups.

68DJ 5 H 9 K 06031 29875 BZ97 A Z 5 6 N 5 6 0 29875 43565 F8Q5 8 D 8 D Z 6 θ Y NGL5 XQ73 80901 23563 PA68 i 1 θ V F7L6 900446479 08653 YL66 Sent in 2 minutes = Rate 9 W.P.M. 18693 27372 18096 12535

49671 82532

Sent in 2 minutes = Rate 9 W.P.M.

EXERCISE No. 8.

CODE.

CENTR	SOIRD	WRSEA	LLIHP
FQAFQ	AIJPL	NAKRF	GWAXF
YVAZA	LALWF	ONUKO	BZJPN
RNOTT	$B A \cdot L M M$	TRAEI	MXYSH
$A \cdot Y D L G$	OQMW	LBFCN	ADGJK.
Sent i	n 2 minutes =	Rate 10 W.P.	M.

P/L.

Not until the voyage was nearing its end did we get our first sight of icebergs.

AAA

A number of particularly fine specimens, huge, mag-

nificent, floated by.

(iii)

There was a sudden drop in temperature just like passing the open door of a refrigerator.

AAA

Sent in 4 minutes = Rate 10 W.P.M.

Numer	als.	Mixed Groups.				
96143	76589	282Y	θ 7 A B	6 P L'S		
19865	48902	Q G 4 4	M i 2.5	HC84		
35765	21005	2 A P 6	LA63	3 Q C 5		
43673	54556	89 i B	6 Y A 2	6 Ũ 1 B		
90215	39678	F9Y2	LA24	37 X N		
28901	57666	A 7 5 D	Y Q 2 7	69YW		
21983	45689	Sent in	2 minutes=	=Rate 10		
Sent in 2 mi	nutes = Rate		W.P.M.			
10	WPM					

EXERCISE No. 9.

CODE.

XLZYX	WAVIP	NABFA	сјног
TWGWY	LYQFH	ABRTN	GAPYA
AINPO	BOOML	HIEFF	TOESA

MORSE IN SEVEN DAYS

NWJEN ZABRZ TORKX MLAPO MHANC LYKFR UXBYD LKORC OAZTB XATMF

Sent in 2 minutes = Rate 11 W.P.M.

(Punctuation symbols in this and future passages, although no longer indicated, are to be sent.)

P/L.

On our arrival at Quebec, we were herded into large

structures resembling outsized cages.

These were the Customs sheds and two long weary hours passed before we finally cleared, eager to commence the next stage of our adventure.

Sent in $3\frac{1}{2}$ minutes = Rate 11 W.P.M.

Numerals.	Mixed	Groups.
20014 65632	QX85	89AC
78921 54556	\tilde{X} U 2 7	A 2 T 5
21897 36421	\overline{P} 5 P 6	0 4 A C
78779 02186	V G 5 3	i D L 6
50028 67644	.θ i 5 C	6 N P 2
39875 21431	5 O W 9	O V 8 5
87967 28555	77BB	U 9 0 V
39875 48673	Z S 2 5	H 4 D 4
Sent in 2 minutes	6 7 S i	О 0 1 і
= Rate 11 W.P.M.	LD59	9 G K 8
	Sent in 2	minutes =
	Rote 11	WPM

EXERCISE No. 10.

CODE.

FOQRK	MLAGX	BEATW	GRAZP
WAFLL	BNCJA	IRLEJ	KONPO
TOEHI	BLHSI	JONSE	PAFQX
LYXVF	AKUWF	GVWQL	ZACBD
EMTPY	OSBRK	SRFKV	LPANX
ZOERN	BLAKE	NSSAL	NGWKF
LEWNP	TRKYQ		
		* 10 TTT D 3	

Sent in 2 minutes = 12 W.P.M.

P/L.

A three day railway journey lay ahead. It was necessary therefore to lay in a stock of "eats" to sustain and fortify.

With a loud clanging of a bell secured abaft its funnel, a massive engine snorted to a halt.

Sent in 3 minutes = Rate 12 W.P.M.

Num	erals.	Mixed Groups.				
18761	25832	68 A B	68EJ	L8H7		
45646	23176	T 7 P 3	TM73	i C 9 6		
5 4 5 5 4	98705	0 i Y 5	· 52GP	4 V J 3		
32786	59555	3 2 O P	9100	PT19		
01098	28637	8 V 4 U	i 1 2 i	H 5 S 3		
89651	28464	NG66	0550	B L 2 2		
66447	39780	AF12	21NN	Z 4 Z 4		
19082	07664	F K 2 3				

Sent in 2 minutes = Rate 12 W.P.M.

Sent in 2 minutes = Rate 12 W.P.M.

What is the sign for Fraction Separative?

" " " " Decimal Point?

EXERCISE No. 11.

CODE.

ADOBC	LAZRR	FKAXY	TRABO
LDCCE	XOTEF	AKRNC	LYYDU
DRKFF	ELMSC	TAHKL	BTASJ
JFPRI	OYEXZ	DRONE	CLVEI
NDUVW	ODDEC	NUZLK	OFNFR
ENGIL	PRAVD TRKMM	LOMOD	PUNAD RKBCK

Sent in 2 minutes = Rate 13 W.P.M.

P/L.

The journey was one of constant delight. Bowling along the borders of the Great Lakes, those inland seas upon whose waters plough ships as large as any ocean going liner, on

MORSE IN SEVEN DAYS

through the fertile lands of Ontario, past great orchards ablaze with colour.

Sent in 3½ minutes = Rate 13 W.P.M.

Numerals.	Mixed Groups.			
18761 23852 64654	PR44 12HH AP64			
67132 45870 50709	4HV4 95DC 63PA			
68231 28911 45466	ONOO OONS PR54			
32719 86054 39822	DP06 AZ21 3FF2			
34764 38219 76763	LK15 K56X Y2Y3			
82190 02055 32197	L24L PF22 G43G			
Sent in 2 minutes = Rate	AC5A ZY13 QU29			
13 W.P.M.	B L 2 9 A 7 A 6 9 2 U V			
	Sent in 2 minutes = Rate			
** *	13 W.P.M.			

What is the sign for Oblique Stroke? What is the sign for Hyphen?

EXERCISE No. 12.

CODE.

HFQLY	QPAML	XKROT	ZOHNA	GWGWT
TXZAX	BOMOL	AIPĴĻ	SOSES	YVAUW
BZJPN	MBBLA	TAREE		ANKXF
AWXLD	OSTAK	NARKA	FOHPN	
ARPKC	XFALT	PLJIA	BHILL	TRCKB
LPYYK	OXAFW	UTMVB	AZZAM	OPLGW

Sent in 2 minutes = Rate 14 W.P.M.

P/L.

Green fields gave way to huge forests which in turn thinned to scrub rocks boulders and mountains.

As we sped onwards ever faster the thunder of our approach and the screech of the whistle stirred the stillness into which we had intruded. Wailing echos were flung from mountain top to mountain top and hurled back at us like broadsides as if to demonstrate the resentment our intrusion had aroused.

Sent in 5 minutes = Rate 14 W.P.M.

Numerals.

1	2	3	5	5	4	9	8	7	6	8	5	3	2	1	9	2	0	1	5
2	2	4	7	6	8	9	2	1	0	0	2	2	5	6	3	7	9	8	2
4	3	6	6	1	2	0	0	1	5	6	3	9	2	1	8	7	9	8	7
6	4	3	5	2	5	3	2	3	4	2	1	9	2	5	6	8	7	2	4
2	9	0	9	5	2	1	2	1	6	4	6	7	3	2	2	1	9	2	5

Sent in 2 minutes = Rate 14 W.P.M.

Mixed Groups.

T A S S	A 6 Z 9	58 P L	Q 1 θ Y
Z 6 3 Y	i S 9 1	H M 68	D O 5 6
F L 6 6 F 4 7 T 2 9 B L Z Z 2 2 L K 9 7	PA59 EL90 3BL3 ES88 96KF	A 9 8 2 G 7 8 G 9 F 8 L θ O E 1	Q 6 Y 5 E 5 S i 0 6 Y F G F 2 3

Sent in 2 minutes = Rate 14 W.P.M.

What is the sign for Note of Interrogation?

" " " " Apostrophe?

EXERCISE No. 13. CODE.

PJOKF	DASLE	NABBC	ODOLR
DNAUW	LESDX	VOLOD	LRDZY
VWGBC	VAGAB	CITYE	PREIN
NAZYT	MOYTK	NEEPJ	VIVLK
ELMHR	MLMMJ	TKFLR	UTZAB
DZXEK	EIITH	ZOZBB	COXAB
NADEN	NEDFF	LEDTH	LOXAL
PLEHT	$G \times R \times K$	EEKON	BACTH

Sent in 2 minutes = Rate 15 W.P.M.

P/L.

Winnipeg was reached in the early hours of a Sunday morning. We were greeted by a majestic salute, the booming

MORSE IN SEVEN DAYS

of thunder, as a terrific storm let loose its violence over the town.

(The heat had been oppressive for a long time)

Outlines of tall buildings were illuminated by vivid flashes.

Sent in 31 minutes = Rate 15 W.P.M.

Numerals.

Sent in 2 minutes = Rate 15 W.P.M.

Mixed Groups.

A P 1 9	9 0 B B	B 8 4 C	D 2 8 D
F 5 4 G	B S 5 9	N J 4 6	M T 8 9
H A 6 7	D 4 6 C	A Z 2 9	H O θ 1
6 A 7 H	4 L 5 J	9 F S R	i 9 8 S
O D 2 7	0 P O F	V 9 U 6	E S 9 J
7 N G 8	1 2 J J	S E 7 5	O S 5 3
i 9 8 B	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5470	0000

Sent in 2 minutes = Rate 15 W.P.M.

What is the sign for Semi Colon?

.. .. Colon?

" " " " " Underline or Block Letters?





D/A/S WITHOUT AN INSTRUCTOR

By H.O.LEWIS